



## **Beyond effective knowledge networks: The case of Indonesian credit unions**

Aries Heru Prasetyo, Ariana Chang and Wei Lo

How to cite this article:

Prasetyo, A.H., Chang, A., & Lo, W. (2016). Beyond Effective Knowledge Networks: The Case of Indonesian Credit Unions. *Journal of Co-operative Studies*, 49(1), 20-32

# Beyond Effective Knowledge Networks: The Case of Indonesian Credit Unions

**Aries Heru Prasetyo, Ariana Chang and Wei Lo**

Increasing social value has become vital in developing countries, and one of the key ways to do this is via the co-operative movement. Co-operatives are formed, managed and developed by members. By conducting case study analysis, this research tried to discover the effective ways of developing effective knowledge networks that can create sustainability, thus preparing ways to increase social value — the individual and community wellbeing. Using credit unions as the unit of analysis, we found that organisation structure for each level must be treated as player within the network. The management team must act as knowledge enhancer, the supervisory board acting as nurturer, while the board of directors plays a mediating role. Members may act as knowledge stem-cells which develop through inertia. The faster they can disseminate new knowledge, the higher probability that the movement may inspire a continuous learning community to enhance the civilization.

## Introduction

The role of credit unions in increasing social value has been suggested (Byrne et al, 2010) in that they can significantly impact on and increase the financial capability of each member (Corr, 2006; Dixon, 2006; Fessler et al, 2007). Unfortunately for the past twenty years, the impact of the movement has weakened due to high level competition with the banking sector. Although they share different platforms, they sometimes provide similar services in terms of marketing functions; implementation of loans such as housing, education; and small-business investments. Therefore most of the time, the battle would be on the offering credit rate. With it fully capitalised, banks might have better bargaining power than credit unions. Conversely, inefficiency had become the major obstacle for credit unions, which lowered competitiveness tremendously (Fried and Knox Lovell, 1993). Despite these challenges, credit unions have successfully developed their capability in contributing to social value (McKillop and Wilson, 2014).

The strength of co-operative union lies in the productivity of members (Fergusson and McKillop, 1997). The frequency and volume of credit mechanism will directly impact its performance. Higher credit activity triggers financial capability to provide better loan rates and dividend at the end of every accounting period. Therefore, it is important to understand the systematic mechanism that leads to high productivity.

Research exploring credit union performance has grown rapidly, providing new insights for both measurement and improvement processes. We studied Fried and Knox Lovell (1993), Westley and Shaffer (1997), Ofei (2001), Sollenberger (2008), Hays et al, (2012), McKillop and Wilson (2014), Rixon (2013) suggesting that knowledge had played important role in credit union performance. This is supported by research concerning knowledge management (see, for example Oliva 2014).

Moreover Prusak and Davenport (2000) had clearly stated that knowledge management has become a natural part of human-centred organisations. Knowledge mechanisms are created when one member has close relationships with other members. Surprisingly, knowledge has its inertia. It will diminish quickly by the absence of development. Therefore, nurturing the process of knowledge management in credit union is a crucial step. Twofold knowledge that should be transferred effectively are; (1) social value and (2) the terminology of productivity.

A good practice method for nurturing knowledge is by having either formal or non-formal knowledge networks. Referring to Credit Union Central of Canada, it has been stated that developing knowledge management and networks has become a vital part of the organisation's

policy. It is beneficial not only in increasing productivity, but also in disseminating the importance of social value as counterbalance to existing capitalism. Thus, having a benchmark for effective knowledge networks is needed to gain competitive advantage.

This research was done using multiple case study analysis to the unit analysis. Data was collected over the period January 2014 to February 2016 with the goal to capture real problems and formulate effective strategies for satisfactory solutions. By the end of the process, an evaluation scheme was conducted and a model for further research was proposed.

## **Credit Union and Social Value**

The initial society financial movement happened in Britain during the 1800s. The spirit spread a few decades later to other European countries. In Germany, Herman Schulze-Delitzch and Friedrich Raiffeisen initiated the first credit unions. In the early twentieth century, the concept spread to Canada where Alphonse Desjardins organised the first credit union. Upon further development, credit unions became a formal-legal financial movement. In 1934, US President Roosevelt signed the Federal Credit Union Act into law. In 1970, the National Credit Union Administration (NCUA) was established as an independent federal agency. Congress also formed the National Credit Union Share Insurance Fund to protect deposits at union (see [www.ncua.gov](http://www.ncua.gov)).

In South East Asia, the movement grew rapidly between 1960 and the early 1990s. As in many developing countries, credit unions had successfully promoted the importance of strong financial capability for the community. Using family, church and other religion based-organisations, the idea of community economic development was widely accepted. Through simple ideas in enhancing family economic performance, credit unions established operations in savings and loans. Every member had the responsibility to invest an amount of funds as initial capital which later will be distributed through interest-based loans. Uniquely, the mechanism succeeded in giving members ideas to set up businesses that fully benefited the local community (Fairbairn et al, 1997). Furthermore, the benefit was reflected in terms of social value.

Strandberg (2010) found that credit unions have full power to create sustainable economic development for nations. Starting with the understanding of its genotype, the study highlighted the spirit of sustainability. As the awareness of the citizenship in building economic society increases, credit unions have opportunities to lift performance. Altruistic missions such as: 'people helping people' or 'people before profits' may act as the ideal stimulator for their growth. Maintaining sustainability of the self-managed organisation is not simple. Credit unions not only needed to have a strong and clear mission, but also adequate management mechanisms. The role of leadership, bureaucratic structure, good governance and communication was identified as key elements (Porter and Kramer, 2006; Pohle and Hittner, 2008) that determine how well the concepts of social value will be accepted by the community.

Rooted in its spirit of the local movement has led to many consequences, such as reluctance to change and adopting new paradigm, or even lack of communication among members. These issues limit future growth; therefore, credit unions need something that can light up the spirit on a daily basis; to transform consistently. Moreover, proper dissemination of knowledge is believed to be the most effective way to trigger transformation. Acquiring, communicating, improving and re-utilisation of knowledge support, for example, improved behaviours, learning and collaboration (King, 2009).

When considering recent challenges faced by credit unions, one can see that providing increased social value requires strong knowledge networks. Credit unions must have good collaboration with other parties within their operating environments. This led us to the importance of creating an effective knowledge network.

## Knowledge Networks

Recent studies have tried to explore the evolution of networks (Nonaka and Takeuchi, 1995; Canals et al, 2005). Meanwhile, study on co-evolution of networks is still limited (Tur, 2014). Understanding networks from these two perspectives was believed to be the ideal mechanism in analysing the phenomenon thus leading us in formulating effective knowledge networks.

Referring to Schönström (2005) creating knowledge networks can be seen as a strategic process. Therefore clear objectives, fair and acceptable rules and also organisational compatibility are needed as pivotal elements. On the other hand, the co-evolution perspective found that knowledge network creation must be seen in relation to three major elements: importance of collaboration for the creation, cost of the collaboration and the process of choosing ideal collaborators (Tur, 2014). If we use Creech and Willard's (2001) perspective, one way to lower the cost of collaboration is to fit the organisation's structure to the network. Moreover, the fit between network structures will influence the sustainable power of society value (Becker, 2007). The term fitness can be expanded to several points: sharing the same vision and mission or having equal knowledge and capability. Failure to achieve equality can prompt costly collaborations, including being a trigger for network destruction.

Knowledge networks can be both internal and external, and formal and informal. Ramalingam (2005) identified four dimensions in knowledge network strategies: organisational knowledge, organisational links, organisational context and external factors. Each dimension was found to have hierarchical-systematic processes.

The first dimension declared the needs for clear guidance in building a learning atmosphere. It may include the role and responsibility for each level of management, and formal mechanisms by which all processes will be determined, starting from knowledge acquisition, processing, disseminating, improving and codifying the outcome as organisation lessons learned. The second dimension is organisational links. It is the linkage between knowledge and learning loops. At this stage, the learning environment has developed well and every member understands working as a process of continuous learning.

The third dimension is organisational context. Learning management is seen as equal with the other functions for example: marketing, finance, research and development and also production. Each division can internalise the importance of actively taking part in continuous learning. Unconsciously this will lead the organisation to produce more knowledge based on best practice. This is the basic capital for future benchmarks.

The last dimension, also called the gate to the open network, is external factors. Realising that every relationship has potential for knowledge sharing and could be advantageous. In this stage, the organisation may act as mediator that unites all related stakeholders. Having considered that every player in the environment has its established network, therefore the collaboration will be from one network into another. As long as every network is able to maintain its power, then the probability to be destructive can be minimised.

## Research Methods

A comprehensive and detailed multiple case study analysis was undertaken of three credit unions in Indonesia: Lantang Tipo (west Kalimantan), RIAS (south Sumatera) and Handriya Sanggraha (south Sumatera). Each is a co-operative — membership corporations, owned and democratically controlled by members and designed to operate for the benefit of members (Manwaring et al, 2011). Worthy to note, each is accredited as best performers concerning the number of members and total assets to be managed. An additional consideration is that each unit of analysis is already aware of the importance of knowledge management.

This research utilises multiple case study design on the three established credit unions to impart unique viewpoints. A case study is an optimal methodology in which in-depth investigation is

required (Feagin et al, 1991). According to Thomas (2011), a case study is a holistic study that conducts an analysis of people, events, decisions, periods, projects, policies, and institutions. In our research, in-depth interviews and focus group discussions were conducted with upper level management partners of the three credit unions. In addition, thorough observations were held in each of three credit unions.

We developed a database from January 2014 to February 2016 and collected descriptive information with evaluations on the credit unions' services, structure and management, governance and finance, adding validity to the study. Thus, secondary sources were also collected. Our research is focused on building effective internal knowledge networks. Further progress includes accommodating knowledge and learning tools proposed by Nutley et al, (2003). Methods of data collection can be seen in Table 1.

<b>Methods</b>	<b>Data Content</b>	<b>Output</b>
Interviews and observations	<ul style="list-style-type: none"> <li>Records from interviewing the three parties in each credit union</li> <li>Data from observing daily operations/ information from members</li> </ul>	<ul style="list-style-type: none"> <li>Problem mapping</li> </ul>
Problem mapping	<ul style="list-style-type: none"> <li>Data from analysing problem mapping to find the roots</li> <li>Records from discussing the findings with the three parties</li> </ul>	<ul style="list-style-type: none"> <li>Problem statement</li> </ul>
Scenario analysis	<ul style="list-style-type: none"> <li>Records from brainstorming with the representative of the three parties (Team A)</li> </ul>	<ul style="list-style-type: none"> <li>Alternative sets of programmes</li> </ul>
Focus group	<ul style="list-style-type: none"> <li>Records of discussion focus group with Team A</li> <li>Results from discussion with supervisory board</li> </ul>	<ul style="list-style-type: none"> <li>Programmes selected</li> </ul>
	<ul style="list-style-type: none"> <li>Records from focus group discussion with Team A</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge mapping</li> <li>Formal-written mission and objectives, procedure and control mechanisms</li> </ul>
	<ul style="list-style-type: none"> <li>Data from series of seminars to all parties</li> <li>Data from series of workshops every 3 months</li> <li>Design of coaching and mentoring system</li> <li>Design of monitoring system using internet based database for developing knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Seminar</li> <li>Series of workshops</li> <li>Coaching &amp; mentoring Fully monitored system</li> <li>Database</li> </ul>
Events	<ul style="list-style-type: none"> <li>Conducting events</li> </ul>	<ul style="list-style-type: none"> <li>Programme implementation</li> </ul>
Focus group	<ul style="list-style-type: none"> <li>A process of comprehensive evaluation</li> <li>Data of initiating corrective programmes</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation report and corrective action</li> </ul>

**Table 1: Methods of data collection**

## Findings and Discussion

Due to high competition in the retail finance sector, much discussion concerned ways to compete with the commercial retail banking sector, including rates of interest and service to the customer. This complies with Anderson and Liu (2013) who state that competition between the two players has never ended. The study found that almost 100% of products from the three units of analysis share similar offerings with commercial banks. When both of them are targeting the same customer then the battle would be on lending and saving rates.

Considering that each bank has full support from national and global conglomerations, the bargaining power of credit unions will be lower from time to time. This has been experienced



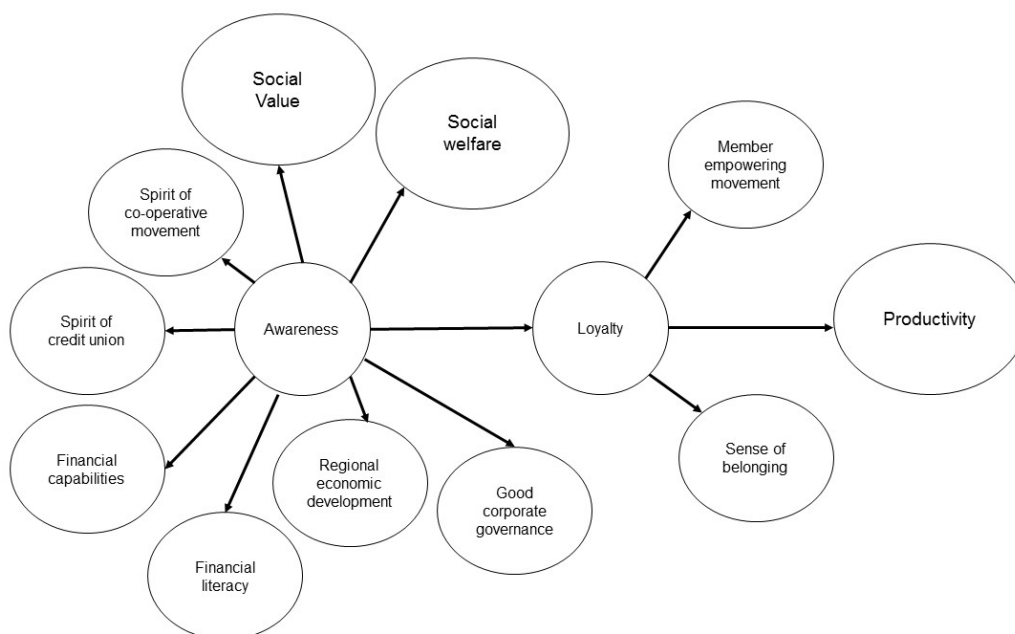
by all three credit unions. Since the government subsidises banks' property loans, the same type offered by the credit union decreased more than 68% for the past three years, with many members questioning its competitiveness:

If the bank provides a simple mechanism to get the fund with cheaper rate of interest, then why should we lend from credit union? We maintain our membership to have its deposit services. Since they offered better rate (Statement representative of more than 54% of respondents to the question "How you compare the competitiveness of credit union with commercial bank?").

In 2015, the bank deposit rate on average was 4% and offered a lending rate of 13% annually. Meanwhile, credit unions offered the lending rate at 15% annually, with stated deposit rate at 10%. Customers, then, become members of a credit union for its deposit rate, and use banks for the lending rate. Early in 2016, the government sought opinions about lowering the lending rate for banking to below 10%. The single rate policy might hurt credit unions. If they decided to maintain the deposit rate at 10%, then member can borrow money from the bank with 9% and deposit the funds into the credit union for 1% spread.

In the first discussion sessions, we were addressing the question concerning knowledge dissemination within organisations. The proposed logic was that if the organisations have effective knowledge management mechanism then there will be a systematic approach to motivate all members to join a continuing learning programme as the basis to enhance understanding of the co-operative movement.

Comprehensive analysis showed that among all units of analysis, knowledge has been treated traditionally. Organisations rely more on tacit knowledge rather than having a formal knowledge management process. Most of time, disseminating the spirit and basic idea of credit unions would be the responsibility of a specific position at managerial level. No programme had been initiated to have more contributions from members in disseminating the importance of the social value of the credit union. Our second finding, therefore, is that all units of analysis experience gaps in empowering members to be more engaged with the movement. One potential indication is the minimum learning process that led to knowledge capability.



**Figure 1: Knowledge concept mapping**

After conducting a literature review to explore ideas about developing an effective learning loop for future knowledge management, we conclude that credit unions need to be developed as knowledge organisation systems. Awareness and loyalty both act as inputs for better productivity among parties within the credit union. The philosophy of "people helping people" needs to be acquired, understood, improved and disseminated from one generation into the

next generation. This is not only for regeneration purposes but also nurturing social value as the crucial point.

Identifying the ideal role of a credit union in the wheel of social capital is simple, but it is not practical. Since the union underlies its strength on the movement, the challenge lies in convincing all parties that increasing social value might be the best long-term competitive advantage. Having considered all factors, we conclude that the power of knowledge might get the organisation to its original spirit. This idea supports, for example, Amagoh (2008) where the initial action would be creating effective knowledge network, starting with knowledge concept mapping (see Figure 1).

### **Relating credit union spirit to social value**

As a community movement, relating credit union spirit to social value is not that difficult. Both are found to share the same principles and social orientation. Credit unions might use this to provide a better lending service by providing guidance to the community on how to manage both funds and business properly. Shared responsibility in giving back funds to the credit union was a vital driving force in motivating the community in creating better performance. This links to other studies which conclude that the use of other party's source of funds can be a good trigger for short and long term performance (Jaramillo and Schiantarelli, 2002; Tsoutsoura, 2004; Dube, 2013).

The second point is that after giving support to social business, the credit union can act as a mediator in disseminating messages about the mission and social value that although it could be more expensive, social buying represents helping others. Therefore, asking members to give contributions to social businesses is doable. As the cycle continues, more social innovation can be created. This is beneficial to all stakeholders. On one hand, credit unions find a way to optimise their development, and on the other hand, society will acknowledge social value as the common virtues.

### **Discovery of knowledge organisation system/design**

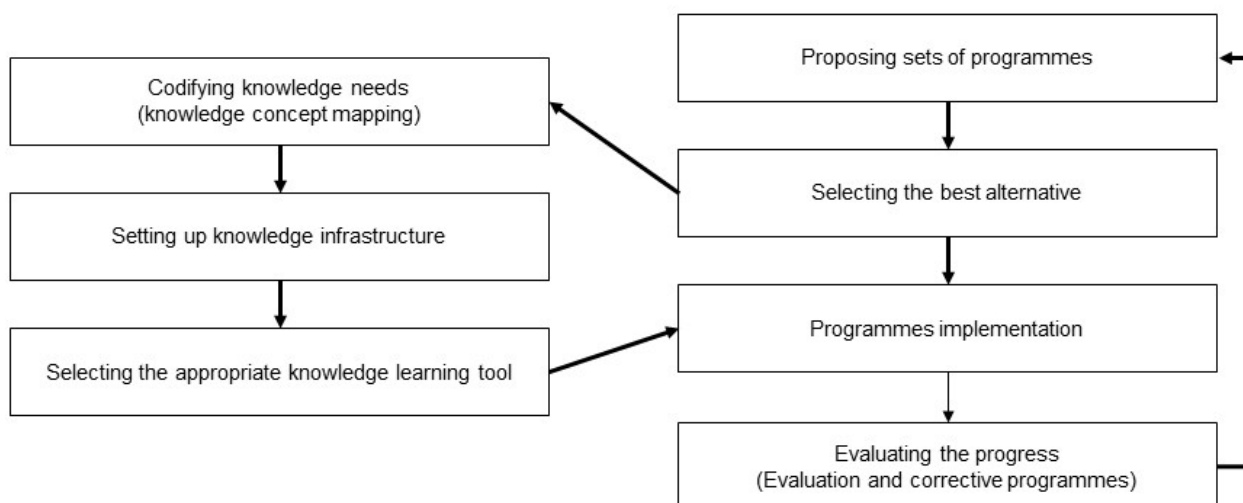
Knowledge concept mapping as seen above is a way to design this type of message. The next step was setting up knowledge infrastructure (see Figure 2). This step involved providing clear guidance for all parties in nurturing knowledge. We started with the simple idea that the knowledge cycle derived from 'input-process-output', requiring data and information as knowledge inputs. A proper and retrievable database is needed to support the idea. Ensuring standard operating procedures and improved administration mechanisms would be advantageous.

The second step is process. It refers to how raw data can be transform into useful information. This includes systematic methods to analyse data. A series of workshops for statistical practice and business analytics was carried out to provide knowledge. A complementary coaching and mentoring programme ensured that the knowledge had been absorbed effectively.

The third step is output. The role of knowledge in organisations is significant when considering business decisions. We therefore conducted small business case analysis in order to provide the ability to use the knowledge properly. The workshops were organised periodically using local benchmarks as cases.

Accommodating all messages into series of action, we tended to design every event concerning the local needs. If the workshop needed to be done in each region, then we use non-formal format instead of using formal events. This is beneficial since informal meetings may be the best communication process for engaging members. For management purposes, we initiated learning moments 15 minutes before every employee starts to work. This is called 'internalisation'. Reminding all staff of the importance of mission and values and their role as ambassadors of the credit unions was believed to have strong impact to performance. Periodic events such as: lesson learned sessions where everyone shares their experience, or CEO

messages where top management can deliver motivational spirit to all staff, were acknowledged as ideal means of communication among parties.



**Figure 2: A knowledge organising system**

### The role of knowledge network

From our research, it is found that creating a knowledge network starts from the bottom up — meaning the people. Awareness of needs and willingness to have better performance are crucial part of the changes. Since credit unions consist of three major parties: (1) annual member meeting, (2) supervisory board, and (3) management team, then development of knowledge networks must cover each component. Every party must fully realise the responsibilities of its position within the structure. Therefore, we propose new terminology concerning the needs (see Table 2).

We depict three possible positions: knowledge acquirer, knowledge mediator and knowledge enhancer. As acquirer, the party needs to provide data and information to the mediator. While knowledge mediator acts as idea trigger to be absorbed. Lastly, enhancer has the responsibility to improve the quality of knowledge to be more useful for future decision making.

Organisational structure	Role within knowledge network		
	Knowledge acquirer	Knowledge mediator	Knowledge enhancer
Annual member meeting	V		V
Supervisory board	V		
Board of directors	V	V	
Management team	V		V

**Table 2: Fitness between the organisational structure and its role within the network**

Another important finding in this study was that each level shared the same role as knowledge acquirer. It means that the responsibility to provide data and gathering information happens at all levels, but only the board of directors act as mediators. Due to the structure of the credit union, the board of directors is chosen by members. They have a mandate to manage the credit unions and thus play an intermediary role between management team and members.

The obligation to enhance knowledge stems from members and the management team. This is to enable member participation in the movement. More members mean more probability of disseminating the knowledge properly. Shared testimony from one member may motivate others to join in the credit union. The role of the management team in this context is to provide formal organisational guidelines and policy to ensure effectiveness of the programme.



## Obstacles to creating effective knowledge network

The study also identified several potential obstacles in creating knowledge networks. The first obstacle is leadership style. Since the decision to have knowledge network might result in the need for transformational leadership, resistance from top leaders to change must be eliminated. We found at the three units of analysis, faster adoption of the paradigm was triggered by open-minded leadership.

The second obstacle is the communication process. Like most organisations that tend to be bigger, credit unions are facing ineffectiveness in communicating with all parties. This requires change, since it may act as a constraint in delivering messages as an outcome from knowledge management. Routine communication using simple media would be advantageous. Informal meetings among parties must be initiated frequently in order to have open communication.

The third obstacle is society's paradigm. As mentioned before, credit unions can have a significant impact on increasing social value, but it needs support from the wider society. Hence, the management team, acting as knowledge enhancer, has the responsibility to provide knowledge in the simplest form and media to build strong relations with all parties.

The fourth obstacle is structural inertia. Up to some levels, the network will become wider. One network might have collaboration with so many networks which sometimes share different values. This is a true challenge. Credit unions must be able to consider carefully their choice of partners. Bad companionship can lead to destruction of the credit union. Similarity of product and service with commercial banks is a good example.

## Is it effective to increase social value?

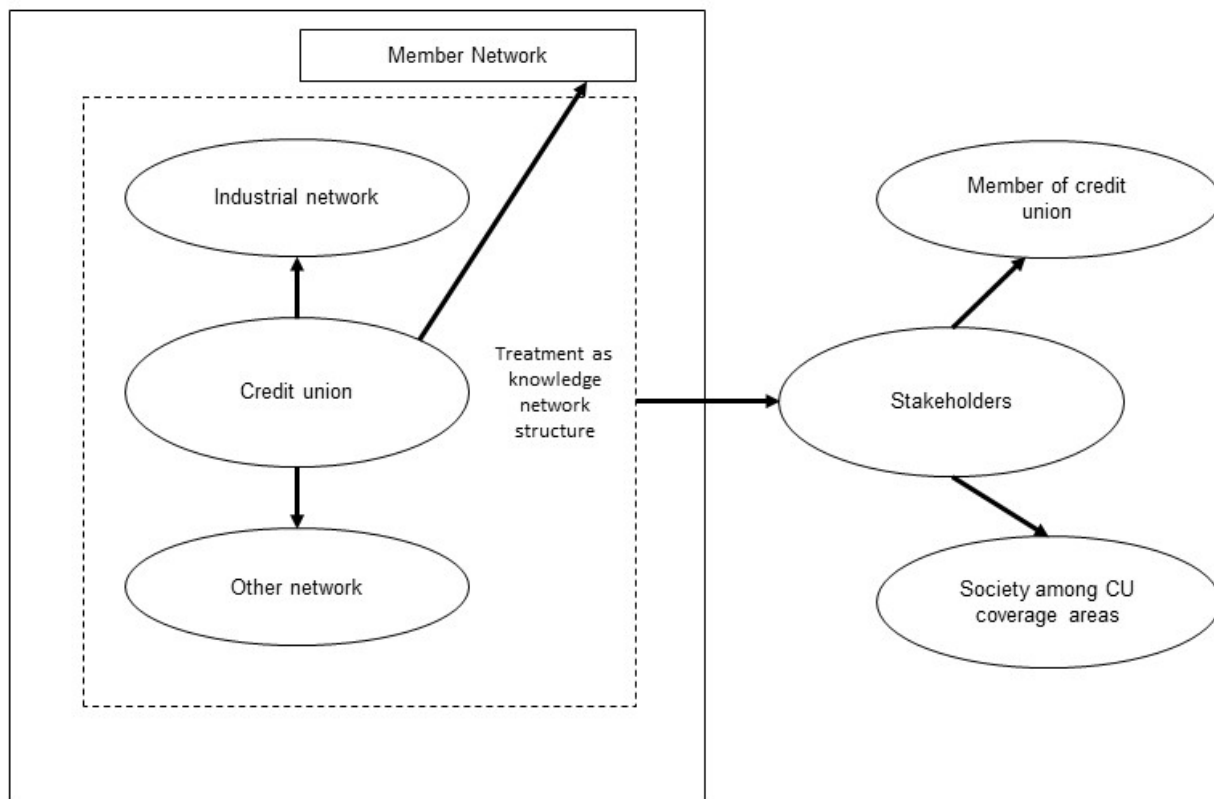
Conceptually, the impact of credit unions to increase social value can be traced easily, but defining key performance indicators is not simple. Recent research in this area is still limited. Several papers share different results because of the differences in society awareness levels. For example, using European countries as a sample, Mulgan (2010) and Wood and Leighton (2010) explained that the ideal measurements can be quantitative and qualitative. In the qualitative, output and outcome were considered as elements to be measured. Number of events determined the performance. This is debatable since the best measurement should be the quality of the events or post-ante event, but this indicator still can be used. The quantitative measurements are cost benefit analysis, social accounting, social return on investment and basic efficiency resource analysis.

In this study, we decided to use a combination of qualitative and quantitative indicators. First, we studied several studies which gave us guidance to understand model of organisational effectiveness. From this we selected four possible models, summarised in Table 3.

Model	Conceptualisation	Focus of process	Sources
The goal model approach	Organisation was built under same considerations to achieved common desired	Achieving organisational goals	Etzioni (1960); Altschuld and Zheng (1995); Robbins (2003); Schermerhorn et al (2004)
The system model approach	Organisation is a system with rigorous process of transforming input to output	Input — process — output	Yutchman and Seashore (1967); Cameron (1986); Altschuld and Zheng (1995); Schermerhorn et al (2004); Mullins (2008)
The process approach	Organisation formed as negotiating mechanism between goals and referents	Power shared among different interest	Connolly (1980); Cameron (1986); Schermerhorn et al (2004); Kleijnen et al (2009)
The strategic constituency approach	Organisation was formed to meet the needs of the stakeholder	Process to satisfy the stakeholder	Cameron (1986); Dalton and Dalton (1988); Schermerhorn et al (2004)

**Table 3: Possible models and approaches**

After a series of focus group discussions with representatives from all organisational levels, our concern was how the outcome of knowledge structure may increase social value in a specific time frame. By positioning stakeholder interests as a determination of specified social value, we have confidence in choosing model number four: the strategic constituency approach. For practical derivation, the framework used to build up key performance indicators can be seen in Figure 3.



**Figure 3: Framework for deciding KPIs**

Credit unions share high complexity compared to other organisations. The role of stakeholder acts both as service provider and customer for the service offered. We deployed surveys to identify stakeholder needs that can be used to enhance the movement. The three top needs are:

1. Financial literacy education.
2. Knowledge of the credit union movement.
3. Entrepreneurial skill.

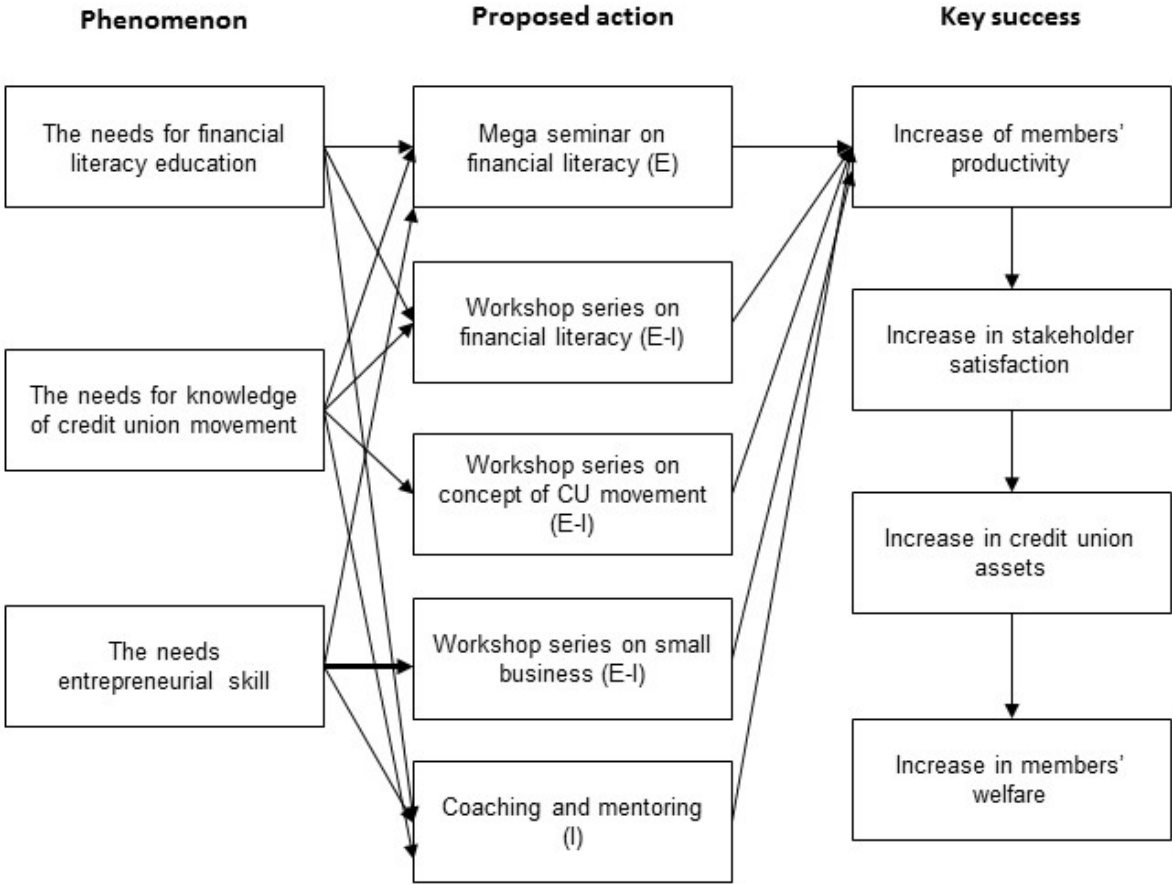
The supported argument for the first answer is that most of the stakeholders do not know how to allocate income regularly. They tend to prioritise monthly income for consumption purposes over saving or investing. Hence, therefore they joined the credit union. The credit union was used to fulfil lack of funds while they experienced high periods of consumption. This led us to the logical reasons for number two.

Given that 82% of the members are farmers who make their financial performance determined primarily on the price of commodity, then when the global price for palm and rubber are high, most of them are found to have abnormal income, and vice versa. Thus, it is logical to accept answer number three. After looking at internal strengths and weakness profiles, we use this indicator as the key for evaluation (see Figure 4).

All proposed action was carried out from 2013-2015. In January 2016, we started to evaluate the progress, using an event study approach (before and after the action took place). To measure members' productivity, we used the percentage of inactive members annually. After

a series of actions, the number of inactive members reduced from almost 45% to 28% for total members. This showed an increase in members' productivity. This fact was supported by the satisfaction survey carried out by the credit union. Compared with 2014 and 2015, reported satisfaction levels (using 5 point Likert scale) in 2016 increased to level 4. This shows that the organisation succeeded in identifying mechanisms to serve the stakeholder better. This is the ideal path to achieve higher social value.

Having an increase in member productivity and level of satisfaction directly impact on the credit union's assets. We measured growth in total assets to represent the outcome. In 2013, total assets stood at 15% and increased to over 20%.



Note: E= done by external network; I= done internally as outcome of proper knowledge management mechanism

**Figure 4: Key indicators of success based on identified need**

Identifying member welfare objectively is difficult. Therefore, we use an approximation approach by conducting in-depth interviews with all branch managers (in management team structure), and have them explore the question “how much is the increase of family monthly consumption compared with the previous three years” and “how have you financed the expenses?”. From this we arrived at an average number of up to 18% in consumption. This is due to average national inflation of 8.7% for the past three years.

A unique finding was the declaration that on average, families succeeded in allocating 20-24% of their monthly income as saving. Mostly, they did so to acquire new farming land for the next four years. This is one of the positive outcomes from the knowledge network provided by the credit union. This is a successful change that needs to be developed further.

The most astonishing performance was the fact that even though the global commodity price had reduced more than 16% during the previous two years, members acknowledge income increases in the range of 16-18% in early 2016. Thus, we may conclude that the process gave significant contribution to social value.

## Limitations

The research only covered the first stage of building an effective knowledge network. Therefore, future study could be done to test the proposition empirically to generalise the findings. The second limitation is that it does not provide a modelling process. Thus further research must take it into account in order to have a firm theory in knowledge network.

## Conclusions

In this study, we found that credit unions might play important roles in achieving higher social capital. In order to do this, credit unions need proper and effective knowledge networks. We propose some transformation role of each level so that they may comply with the requirements of knowledge networks. The study also succeeded in identifying future obstacles so that it might be useful for future decision-making. Finally, using a strategic constituency approach model, we succeeded in measuring the effectiveness of the network in achieving higher social value. Therefore, we suggest that an effective knowledge network structure may enhance social value.

## The Authors

Aries Heru Prasetyo, Ariana Chang and Wei Lo are all PhD Candidates at the College of Management, Fu Jen Catholic University, New Taipei City, Taiwan, ROC. The authors would like to thank Professor Jersan Hu and Professor Anthony Kuo from Fu Jen Catholic University for their insight to the study, and to the two anonymous reviewers from the Journal of Co-operative Studies for their bright insight to the paper. The study was financed by Ministry of Science and Technology, Taiwan, ROC.

## References

- Altschuld, J W and Zheng, H Y (1995) Assessing the effectiveness of research organizations. *Evaluation Review*, 9(2): 197-216. doi.org/10.1177/0193841X9501900205
- Amagoh, F (2008) Perspective on organizational change: system and complexity theories. *The Innovation Journal: The Public Sector Innovation Journal*, 13(3), article 3: 1-14 [online] www.innovation.cc
- Anderson, R G and Liu Y (2013) Banks and Credit Unions: competition not going away. *The Regional Economist*, August.
- Becker, F (2007) Organizational ecology and knowledge network, *California Management Review*, 49(2), Winter: 42-61.
- Byrne, N, Power, C, McCarthy, O and Ward, M (2010) The potential for impact of Credit Unions on member's financial capability: an exploratory study. Working Paper Series: 10/08, Dublin: Poverty Research Institute.
- Cameron, K (1986) A study of organizational effectiveness and its predictors. *Management Science*, 32 (1): 87-112, doi.org/10.1287/mnsc.32.1.87
- Canals, A, Boisot, M and MacMilan, I (2005) Evolution of knowledge management strategies in organizational populations: a simulation model. Working paper WP04-007, available at <http://www.uoc.edu/in3/dt/eng/wp04007.html>
- Connolly, T, Colon, E M and Deutch, S J (1980) Organizational effectiveness: a multiple constituency approach. *Academy of Management Review*, 5: 211-218.
- Corr, C (2006) *Financial Exclusion in Ireland: An Exploratory Study and Policy Review*, Dublin: Combat Poverty Agency.
- Creech, H and Willard, T (2001) *Strategic Intentions: Managing knowledge networks for sustainable development*, Winnipeg, MA: International Institute for Sustainable Development.
- Dalton, T C, and Dalton, L C (1988) The politics of measuring public sector performance, in Kelly, R M (ed) *Promoting Productivity in the Public Sector: problems, strategies and prospects*, Basingstoke: Palgrave MacMillan.
- Dixon, M (2006) *Rethinking Financial Capability: Lessons from economic psychology and behavioural finance*. Report for Norwich Union, London: IPPR.



- Dube, H (2013) The impact of debt financing on productivity of small and medium scale enterprises (SMEs): A case study of SMEs in Masvingo Urban. *International Journal of Economic, Business and Finance*, 1 (10): 371-381
- Etzioni, A (1960) Two approaches to organizational analysis: a critique and suggestion. *Administrative Science Quarterly*, 5: 257-258.
- Fairbairn, B, Ketilson, L M and Krebs, P (1997) *Credit Unions and community economic development*. Saskatoon: University of Saskatchewan Centre for the study of co-operatives
- Feagin, J, Orum, A and Sjoberg, G (1991) *A Case for Case Study*, Chapel Hill, NC: University of North Carolina Press.
- Ferguson, C and McKillop, D (1997) *The Strategic Development of Credit Unions*, Chichester: John Wiley & Sons
- Fesenmaier, J and Contractor, N (2001) The evolution of knowledge networks: an example for rural development. *Journal of the Community Development Society*, 31 (1): 160-175
- Fessler, P, Schurz, M, Wagner, K and Weber, B (2007) Financial Capability of Austrian Households. *Monetary Policy and the Economy*, Q3/07: 50-67.
- Fried, H O and Knox Lovell, C A (1993) Evaluating the performance of credit unions. *Journal of Banking and Finance*, 17: 251-265.
- Hays, F H, Day, N and Belanus, S (2012) Credit Union performance: does CEO gender matter? *Journal of Behavioral Studies in Business*, 10 (2), article 3: 1-13.
- Jaramillo, F and Schiantarelli, F (2002) *Access to long term debt and effects on firms' performance: lessons from Ecuador*. E-library world Bank, doi.org/10.1596/1813-9450-1725
- King, W R (2009) Knowledge management and organizational learning. *Annals of Information Systems*, 4: 3-13.
- Kleijnen, J, Dolmans, D, Muijtjens, A, Willems, J and Van Hout, H (2009) Organizational values in higher education: Perceptions and preferences of staff. *Quality in Higher Education*, 15(3): 233-249.
- Manwaring, S M, Valentine, A and Thomson, M (2011) Social enterprise in Canada: Structural Options. MaRS White Paper series Toronto: MARS available at [www.diverseconomyboard.ca](http://www.diverseconomyboard.ca)
- McKillop, D and Wilson, J O S (2014) Recent developments in the Credit Unions Movement. Working Papers in Responsible Banking & Finance, St Andrews, Fife: University of St. Andrews
- Mullins, L J (2008) *Essentials of organizational behaviour*. 8th edition, Harlow: Pearson Education.
- Mulgan, G (2010) Measuring social value. Eurodiaconia Briefing for Members available at [www.eurodiaconia.org](http://www.eurodiaconia.org)
- Nonaka, I and Takeuchi, H (1995) *The Knowledge Creating Company*. Oxford: OUP.
- Nutley, S, Davies, H and Walter, I (2003) *Learning from Knowledge Management*. St Andrews, Fife: University of St Andrews.
- Ofei, K A (2001), Retooling Credit Unions: the case of Credit Union Association of Ghana. International Labor Organization, IFLIP Research Paper 01-3, available at [www.ilo.org](http://www.ilo.org)
- Oliva, F L (2014) Knowledge management barriers, practices and maturity model. *Journal of Knowledge Management*, 18(6):1053-1074, doi: 10.1108/JKM-03-2014-0080
- Pohle, G and Hittner, J (2008) *Attaining sustainable growth through corporate social responsibility*. IBM Institute for Business Value, Somers, NY: IBM Corporation.
- Porter, M E and Kramer, M r (2006) Strategy and society: The link between competitive advantage and corporate social responsibility, *Harvard Business Review*, [online] [www.hbr.org](http://www.hbr.org)
- Prusak, L and Davenport, T (2000) *Working Knowledge: How Organizations Manage What They Know*, Boston: Harvard Business School Press.
- Ramalingam, B (2005) Implementing knowledge strategies: lesson from international development agencies. Working Paper 244, London: Overseas Development Institute.
- Rixon, D (2013) An examination of key performance indicators reported by Credit Unions in North America. Report for Credit Union Central of Canada, Filene Research Institute, Halifax, NS: CEARC, available at [www.smu.ca](http://www.smu.ca)
- Robbins, S P (2003) *Essentials of organizational behavior*. Harlow: Prentice Hall.
- Schermerhorn, J R, Hunt, J G and Osborn, R (2004) *Core concepts of organizational behavior*. London: Wiley & Sons.
- Schönström, M (2005) Creating knowledge networks: lessons from practice. *Journal of Knowledge Management*, 9(6): 7-29, doi: 10.1108/13673270510629936
- Sollenberger, H M (2008) Financially high-performing credit unions: evaluating performance within a strategic financial vision. Report for Filene research institute, Michigan: Michigan State University, available at [www.mcul.org](http://www.mcul.org)
- Strandberg, C (2010) *Credit Union Social Responsibility: a sustainability road map*. Filene research institute, available at [www.filene.org](http://www.filene.org)



- Thomas, G (2011) *How to do your Case Study: A Guide for Students and Researchers*, Thousand Oaks, CA: Sage.
- Tsoutsoura, M (2004) Corporate social responsibility and financial performance. Published project report. Haas School of Business, University of California at Berkeley available at <http://escholarship.org/uc/item/111799p2>
- Tur, E M (2014) The coevolution of knowledge networks and knowledge creation. Paper to be presented at the DRUID Academy conference, 15-17 January, Rebild, Aalborg, Denmark.
- Westly, G and Shaffer, S (1997) Credit Union policies and performances in Latin America. Working Paper no 355, Inter-American Development Bank, Office of the Chief Economist available at <http://hdl.handle.net/10419/87919>
- Wood, C and Leighton, D (2010) Measuring social value; gap between policy and practice. Eurodiaconia Briefing for Members available at [www.eurodiaconia.org](http://www.eurodiaconia.org)
- Yuchtman, E and Seashore, S E (1967) A system resource approach to organizational effectiveness. *American Sociological Review*, 32(6): 891-903